

1. A method for providing a bookmark in a voice application, the method comprising:

presenting the voice application to a user;

allowing the user to access the voice application and provide input to the voice

5 application;

creating, upon a user request, a bookmark to a location in the voice application;

and

providing the user with access to the bookmark in the voice application in order to return to the bookmarked location.

2. A method according to claim 1, wherein creating, upon user request, a bookmark to a location in the voice application comprises:

saving a pointer to the voice application; and

saving a representation of vocal input by the user to the voice application up to

5 the bookmarked location in the voice application.

3. A method according to claim 2, wherein providing the user with access to the bookmark location of the voice application comprises:

using said pointer to accessing the voice application; and

replaying the representation of the interactions to progress through the voice

5 application substantially up to the bookmarked location.

4. A method according to claim 2 wherein the voice application includes VoiceXML code.

5. A method according to claim 1, wherein creating, upon user request, a bookmark to a location in the voice application comprises:

saving a modified representation of a page of the voice application.

6. A method according to claim 5, wherein providing the user with access to the bookmark location of the voice application comprises:

executing the modified representation of the voice application.

7. A method according to claim 5, wherein the voice application includes VoiceXML code.

8. A method according to claim 5, wherein the modified representation of the voice application includes VoiceXML code.

9. A method according to claim 1, further comprising:

obtaining and saving a first checksum of the voice application when the bookmark is created;

obtaining a second checksum of the voice application when the voice application

5 is accessed using the bookmark; and

comparing the first and the second checksums to determine if the content of the voice application has changed.

10. An apparatus for providing a user access to a voice application through a computer network, comprising:

a server coupled to the computer network, wherein the server has a processor that is programmed to:

5 allow a user to access the voice application and provide input to the voice application;  
create, upon a user request, a bookmark to a location in the voice application; and  
provide the user with access to the bookmark in the voice application in order to return to the bookmarked location.

11. An apparatus of claim 10, further comprising a speech processing device coupled to the processor.

12. An apparatus of claim 10, further comprising an analog to digital converter coupled to the processor, wherein the analog to digital device has an audio input for receiving an analog audio signal from the user.

13. An apparatus of claim 10, further comprising a digital to analog converter coupled to the processor, wherein the digital to analog device has an audio output for sending an analog audio signal to the user.

14. An apparatus of claim 10, further comprising a telephony interface coupled to the processor for sending and receiving audio signals to the user.

15. An apparatus of claim 10, wherein the voice application resides on a remote host, further comprising a telephony interface coupled to the processor for transmitting and receiving audio signals to and from the remote host, respectively.

16. An apparatus of claim 10, wherein the voice application resides on a remote host, further comprising a TCP/IP stack coupled with the network and the processor, the TCP/IP stack for transmitting and receiving data to and from the remote host, respectively.

17. An apparatus for providing a user access to a voice application through a computer network, comprising:

a server coupled to the computer network, the server including:

a processor and associated memory;

a speech processing device coupled to the processor;

communication means coupled to the processor for receiving and sending analog

audio signals to and from the user, respectively; and

network interface means for transmitting and receiving signals to and from

a voice application on a remote host, respectively;

wherein the processor includes:

means for allowing a user to access the voice application through the communication means and the network interface means and provide vocal input to the voice application;

15 means for creating, upon a user request, a bookmark to a location in the voice application; and

means for providing the user with access to the bookmark in the voice application in order to return to the bookmarked location.

18. An apparatus of claim 17, further comprising means for storing one or more bookmarks of the user.

19. An apparatus of claim 18, wherein the means for storing includes random access memory.

20. An apparatus of claim 18, wherein the means for storing includes a magnetic data storage medium.

21. An apparatus of claim 18, wherein the means for storing includes an optical data storage.

22. A system for providing a user access to a voice application through a computer network, comprising:

a voice portal server coupled to the computer network, the server including:

a processor;

5 a speech processing device coupled to the processor;

communication means coupled to the processor for receiving and sending  
analog audio signals to and from the user, respectively; and

network interface means for transmitting and receiving signals to and from  
a voice application on a remote host, respectively;

10 wherein the processor is programmed to:

allow a user to access the voice application through the communication  
means and the network interface means and provide vocal input to the voice  
application;

create, upon a user request, a bookmark to a location in the voice

15 application; and

provide the user with access to the bookmark in the voice application in  
order to return to the bookmarked location; and  
an application server having the voice application

23. An article of manufacture, comprising:

a computer usable medium having computer readable program code means  
embodied therein for providing a bookmark in a voice application, the computer readable  
program code means in said article of manufacture comprising:

5 computer readable program code means for causing the computer system to allow  
a user to access the voice application and provide input to the voice application;

computer readable program code means for causing the computer system to create, upon a user request, a bookmark to a location in the voice application; and

computer readable program code means for causing the computer system to  
10 provide the user with access to the bookmark in the voice application in order to return to the bookmarked location.

24. The article of manufacture of claim 23, wherein the computer readable program code means for causing the computer system to create, upon user request, a bookmark to a location in the voice application comprises:

computer readable program code means for causing the computer system to save a  
5 pointer to the voice application; and

computer readable program code means for causing the computer system to save a representation of vocal input by the user to the voice application up to the bookmarked location in the voice application.

25. The article of manufacture of claim 23, wherein the computer readable program code means for causing the computer system to provide the user with access to the bookmark location of the voice application comprises:

computer readable program code means for causing the computer system to use  
5 said pointer to accessing the voice application;

computer readable program code means for causing the computer system to replay the saved representation of the interactions to progress through the voice application substantially up to the bookmarked location; and

computer readable program code means for causing the computer system to

10 provide the user with access to the bookmarked location in the voice application.

26. The article of manufacture of claim 23, wherein the computer readable program code means for causing the computer system to create, upon user request, a bookmark to a location in the voice application comprises

computer readable program code means for causing the computer system to save a

5 modified representation of the voice application that includes substantially all results of the vocal inputs up to the bookmarked location.

27. The article of manufacture of claim 23, wherein the computer readable program code means for causing the computer system to provide the user with access to the bookmark location of the voice application comprises computer readable program code means for causing the computer system to execute the modified representation of the

5 voice application.

28. The article of manufacture of claim 23, wherein the computer readable program code means in said article of manufacture further comprises:

computer readable program code means for causing the computer system to obtain and save a first checksum of the voice application when the bookmark is created;

5 computer readable program code means for causing the computer system to obtain a second checksum of the voice application when the voice application is accessed using the bookmark; and



computer readable program code means for causing the computer system to  
compare the first and the second checksums to determine if the content of the voice  
10 application has changed.

29. A method for providing a bookmark in a voice application, the method  
comprising:

allowing a user to request a page of the voice application;

loading the page of the application;

5 saving a URL and a checksum of the page;

provide to the user a prompt of the page;

obtain a response from the user;

saving the response from the user;

processing the response from the user; and

10 creating the bookmark to the page of the voice application if the response of the  
user indicates that the user desires to create the bookmark to the page, wherein creating  
the bookmark includes:

requesting from the user a name for the bookmark; and

15 saving the bookmark including the name of the bookmark, one or more  
responses that the user proved for the page of the application, the URL and the  
checksum of the application.

30. The method of claim 29, further comprising clearing saved information and loading another page if the response of the user indicates that the user desires to load another page.

31. An apparatus for providing a user access to a voice application through a computer network, comprising:

a server coupled to the computer network, wherein the server includes:

means for allowing a user to request a page of the voice application;

means for loading the page of the application;

means for saving a URL and a checksum of the page;

means for provide to the user a prompt of the page;

means for obtain a response from the user;

means for saving the response from the user;

means for processing the response from the user; and

means for creating the bookmark to the page of the voice application if the response of the user indicates that the user desires to create the bookmark to the page, said means for creating the bookmark including:

means for requesting from the user a name for the bookmark; and

means for saving the bookmark including the name of the bookmark, one or more responses that the user proved for the page of the application, the URL and the checksum of the page.

32. The apparatus of claim 31, wherein the server further comprises means for clearing saved information and loading another page if the response of the user indicates that the user desires to load another page.

33. A method for providing a bookmark in a voice application, the method comprising:

allowing a user to request a page of the voice application;

loading the page of the application;

5 saving a checksum of the page;

provide to the user a prompt of the page;

obtain a response from the user;

saving the response from the user;

processing the response from the user; and

10 creating the bookmark to the page of the voice application if the response of the user indicates that the user desires to create the bookmark to the page, wherein creating the bookmark includes:

saving a modified representation of the voice application that includes

substantially all results of the vocal inputs up to the bookmarked location;

15 requesting from the user a name for the bookmark; and

saving the bookmark including the name of the bookmark and a reference to the modified representation of the voice application.

34. The method of claim 33, further comprising loading another page if the response of the user indicates that the user desires to load another page.

35. An apparatus for providing a user access to a voice application through a computer network, comprising:

a server coupled to the computer network, wherein the server includes:

means for allowing a user to request a page of the voice application;

means for loading the page of the application;

means for saving a checksum of the page;

means for provide to the user a prompt of the page;

means for obtain a response from the user;

means for saving the response from the user;

means for processing the response from the user; and

means for creating the bookmark to the page of the voice application if the response of the user indicates that the user desires to create the bookmark to the page, wherein the means for creating the bookmark includes:

means for saving a modified representation of the voice application that includes substantially all results of the vocal inputs up to the bookmarked location;

means for requesting from the user a name for the bookmark; and  
saving the bookmark including the name of the bookmark, a reference to the modified representation of the voice application and the checksum of the page.

36. The apparatus of claim 35, wherein the server further comprises means for clearing saved information and loading another page if the response of the user indicates that the user desires to load another page.